

CLAIMS

WE CLAIM

1. A cord spool for winding a lift cord for lifting and lowering a window
5 covering,
the cord spool including an elongated generally cylindrical body with a large diameter end and a small diameter end and a circumferential outer surface of a given length extending there between wherein the circumferential outer surface having a plurality of generally parallelly extending longitudinal ribs.

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2. The cord spool of claim 1 wherein, the ribs extend along the entire given length of the outer surface from the large diameter end to the small diameter end.

15 3. The cord spool of claim 1 wherein the ribs are short ribs which extend only along a first longitudinal section of the spool and, the first longitudinal section starting at the large diameter end and extending a part of the entire given length of the spool towards the small diameter end.

20 4. The cord spool of claim 1, wherein a first number of long ribs extend along the entire given length of outer surface of the spool, and a second number of short ribs extend along a first longitudinal section of the spool and are shorter than the long ribs and the first longitudinal spool section starting at the large diameter end and extending a part of the entire given length of the spool towards the small diameter end.

25 5. The cord spool of claim 4, wherein, the first spool section the long and short ribs alternate about the circumference of the spool.

6. The cord spool of claim 1 wherein the ribs are tapered being wider at the large diameter end and progressively narrowing in the direction of the small diameter end.

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7. The cord spool of claim 4 wherein the short ribs extending only along the first spool section have a stronger taper than the long ribs extending along the entire given length of the spool.

8. The cord spool of claim 1 further including, the cord spool is a conical spool including a first spool diameter at the large diameter end and a second spool diameter at the small diameter end, the first spool diameter being larger than the second spool diameter, and the diameter of the spool decreasing over the entire given length of the spool from first spool 5 end to second spool end.

9. The cord spool of claim 8 further including, the first spool section starting at the large diameter end and extending a part of the entire given length of the spool towards the small diameter end, a second spool portion extending towards the small diameter end after 10 the first spool section, and the first spool section is conical with a stronger taper than the second spool section.

10. The cord spool of claim 9 wherein, the length of the second spool section is longer than the length of the first spool portion.

15 11. The cord spool of claim 1 wherein the large diameter end includes a mounting means for rotatably mounting the cord spool in a support means, and wherein the support means includes a camming surface adjacent the large diameter end for moving a first winding of the cord about the spool in a direction away from the large diameter end of the cord spool, 20 such that a next winding will not overlap the first winding.

12. The cord spool of claim 1 further including at least one longitudinally extending slot in the small diameter end adapted to receive a second end of the lift cord for attachment to the spool.

25 13. The cord spool of claims 1 further including an end plug attachable to the small diameter end and adapted to receive a second end of the lift cord for attachment to the spool.

30 14. The cord spool of claim 13 wherein, the end plug has a longitudinally extending cylindrical portion forming an extension to the cord spool.

15. The cord spool of claim 14 wherein, the cylindrical portion of the end plug is a conical portion having an increasing diameter extending away from the small diameter end.

16. The cord spool of claim 13 wherein the small diameter end and end plug include respective co-operating features which are able to secure resiliently the elongated generally cylindrical body and the end plug in a plurality of relative angular positions such 5 that the end plug may be snap-indexed between the relative angular positions to adjust cord length.

17. A lifting and lowering mechanism for a blind, including:
10 a rotatable drive shaft;
at least one lift cord;
and a cord spool for winding the at least one lift cord and mounted for rotation with the winding shaft, the cord spool having a large diameter end and a small diameter end, defining a conical circumferential winding surface therebetween for the cord;
wherein the cord spool has a plurality of longitudinally extending, radial ribs on the winding 15 surface, which are located at least on the circumferential area adjoining the large diameter end.

18. The lifting and lowering mechanism of claim 17, further including an end plug attached to the small diameter end to receive one end of the at least one lift cord.
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19. The lifting and lowering mechanism of claim 18, wherein the end plug has a cylindrical portion forming an extension to the spool, but being without a taper or with a taper opposite to the spool.

25 20. The lifting and lowering mechanism of claim 18, wherein the end plug has a plurality of circumferentially distributed radial slots, each of which is adapted to receive an end of the at least one lift cord for attachment.

30 21. The lifting and lowering mechanism of claim 17, further including a support for rotatably supporting the cord spool.

22. The lifting and lowering mechanism of claim 21, wherein the support has a camming surface adjacent the large diameter end of the cord spool for guiding the lift cord to be wound onto the spool.

23. The lifting and lowering mechanism of claim 21 wherein a first side of the support is arranged to rotatably support the cord spool and a second side, opposite the first side, of the support is arranged to support a drive mechanism, such as a motor.

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24. The lifting and lowering mechanism of claim 12 further including a grommet for insertion into a corresponding aperture in a head rail and for guiding said at least one lift cord to or from the cord spool, the support having a base arranged to hold the grommet, such that the support can be fixed to a head rail by means of the grommet.

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25. The lifting and lowering mechanism of claim 22 further including a grommet for insertion into a corresponding aperture in a head rail and for guiding said at least one lift cord to or from the cord spool, the support having a base arranged to hold the grommet, such that the support can be fixed to a head rail by means of the grommet.